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ABSTRACT

The rural work force has lower basic skills to supply labor for new jobs with higher literacy demands. At all levels of education the rural population is at a disadvantage compared with the urban population. One out of five rural adults in Pennsylvania has not continued education past the eighth grade. Among the costs to businesses from employee illiteracy are costly mistakes made by employees who lack adequate basic skills, lost productivity and efficiency, decreased product quality, increased need for supervision, increased cost of training, problems in the relationship of workers with supervisors and coworkers, and accidents due to inability to follow safety directions. In 1986, 25 of the 41 Pennsylvania counties designated nonmetropolitan had no literacy programs funded under State Act 143. The minority group funding priority of the act may discourage literacy programs in rural areas. These factors should be considered in the design of rural programs: geographic isolation means higher costs to deliver services, lower population density results in fewer students per class, the sociodemographic makeup of rural populations must be recognized in program allocation criteria, rural areas have fewer organizations that could provide literacy programs, isolation can lead to low self-esteem and affect motivation to participate in literacy programs, existing rural networks must be used to recruit students, and technologies that can deliver programs over distances are particularly important in rural areas. A set of policies for delivering literacy programs to rural adults in Pennsylvania should be developed. (21 references) (CML)

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A Report on

Adult Literacy in Rural Pennsylvania

Prepared for the

Center for Rural Pennsylvania

A Legislative Agency of the Pennsylvania General Assembly

Representative David R. Wright, Chairman

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Adult Literacy in Rural Pennsylvania

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The Center for Rural Pennsylvania is a legislative agency of the Pennsylvania General Assembly which acts as a focal point for rural policy development. Members of the Board of Directors include:

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To the readers of this report,

The Center for Rural Pennsylvania is charged with bringing to the attention of the Pennsylvania General Assembly the concerns of rural residents in this Commonwealth. Literacy is one of these vital rural concerns.

Rural areas are impacted by a rapidly changing and increasingly competitive world economy. Where it might once have been possible for a rural person to get a job that did not require the ability to read, this is becoming more difficult. Traditional rural occupations including those in agriculture and manufacturing depend more and more on a local worker knowing about science and technology. Most of the new jobs of tomorrow will demand higher skills for entry level positions than the jobs of today.

Literacy levels of the workforce are not keeping pace with increasing literacy demands in the job market. Companies have found that many of their workers are not trainable in new technologies because they lack necessary basic skills. Businesses are very aware that illiteracy is costing them in terms of both productivity and profitability.

The public sector has recognized the economic importance of a literate workforce by establishing a number of literacy programs at both the federal and state level. This paper focuses on the state level programs. The paper concludes that rural areas are not participating in the state literacy programs in proportion to their needs. Rural areas have disadvantages described in the report which must be addressed in order for them to participate more broadly in literacy programs.

The evidence points to the need to develop policies for ensuring that literacy programs which address the unique needs of rural adults are available to residents of the rural Commonwealth. The need for literacy programs is critical for the economic well-being of both rural and urban areas. We must ensure that all residents in need of literacy training have equal access to literacy programs regardless of their geographic location.

Representative David R. Wright, Chairman
Center for Rural Pennsylvania

Adult Literacy in Rural Pennsylvania

Eunice N. Askov*

The rural workforce has lower basic skills to supply labor for new jobs with higher literacy demands. In order for rural adults to effectively participate in existing state literacy programs, the unique needs of rural Pennsylvanians must be addressed.

Adult Illiteracy

Illiteracy is increasing at an alarming rate among the nation's population. According to the U.S. Department of Education, approximately 27 million adults in the United States are functionally illiterate, 45 million adults are marginally illiterate, and 2.5 million adults join the pool of functional illiterates each year (Hunter and Harman, 1985). Currently, a minimum of 548,000 people in Pennsylvania can be classified as functionally illiterate--that is, unable to process written materials necessary to safe, successful, independent functioning in this society. Furthermore, approximately 27,000 high school students drop out of school annually in Pennsylvania (Pennsylvania Adult Education State Plan, 1986-1988). Approximately 36,000 adults are served in basic education programs; however, the numbers of adults with functional literacy problems are increasing (Pennsylvania Department of Education, 1987).

Illiteracy rates increase with the age as well as vary with ethnic/racial background and geographic location of the population. The U.S. Department of Health and Human Services (1985) reports that approximately 28% of adults aged 50-59 and 35% of adults aged 60-65 are functionally illiterate. Illiteracy is also most prevalent among the economically disadvantaged and among minority groups. Black and Hispanic young adults have significantly lower basic skill levels than White young adults (Kirsch and Jungeblut, 1985). In addition, at each age the average level of educational attainment in rural areas is considerably below that of urban areas--especially for adults over the age of forty (Bogue, 1985).

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Educational Levels of Pennsylvania Adults: Rural and Urban Compared

Level of education attained is an objective indicator of competencies associated with literacy behavior. As mentioned above, ***at all levels of education the rural population is at a disadvantage compared with the urban population.*** U.S. Census data on adults aged 25 and older indicate that 36.9% of the rural adults, compared to 34.6% of the urban adult population, did not complete high school. The picture is even more dismal for the farm population which is a subset of the rural. For rural farm, 41.3% did not graduate from high school.

> **One out of five rural adults in Pennsylvania have not continued their education past the eighth grade.**

At lower levels of educational attainment, 20.9% of the rural and 17.4% of the urban adults completed only 0 through 8th grade, meaning that more urban adults went beyond 8th grade. When we look at the percentage of adults 25 and over who completed 12 grades or less, for the rural it is 80.19% and for the urban, 73.89%, showing that a higher proportion of urban adults go on to schooling beyond high school. In fact, 10.5% of the rural population completed 4 or more years of college compared with 13.6% for the state, showing again that the rural population is less likely to have completed college. ***Hence, the need for literacy training may be as great or greater in the rural than the urban areas.***

Changing Labor Market

Various studies predict that recent or expected economic and demographic changes will have a definite impact on the future labor market. Manufacturing employment is anticipated to decline in favor of growth in the service sector. International competition and de-regulation are likely to affect the structure of work within various industries. Transition periods in which new and old technologies coexist result in displacement of some workers and hiring and retraining of others (Johnston & Packer, 1987; Bailey & Noyelle, 1986, Baldwin, 1987). Traditional rural occupations are not exempt from these changes. Farming, forestry, and fishing industries depend increasingly on employees' knowledge of science and use of technology. These trends are all evident now in Pennsylvania, affecting both rural and urban areas.

Changes in employment opportunity will be accompanied by a slower population growth which will produce a general aging of the population. As of 1985, with one million residents over the age of 65, Pennsylvania had the fourth largest elderly population in the country according to the

1980 U.S. Census report. By 1990, approximately 20% of the state's population will be over the age of 60 and by the 2030, it is estimated that it will reach 25% (Bogue, 1985). The slower population growth will reduce the pool of young workers entering the labor market. The 18-24 year-old population will diminish during the next decade, and the proportion of Blacks and Hispanics will increase from 20% in 1985 to 24% in 1994. Larger numbers of women, minorities and immigrants will enter the workforce: they will comprise five sixths of the net additions to the workforce (Johnston & Packer, 1987).

As a consequence of present demographic and literacy trends, a larger proportion of the workforce will have lower levels of basic skills. Labor shortages are already apparent, especially in the service industries.

Impact on Basic Skills Requirements

It is expected that new jobs created by the shift of emphasis from manufacturing to service industries will require higher levels of skills than currently available jobs. ***Most jobs in the future will demand higher skills for entry level positions and for job performance*** (Sticht, 1987). Even today's employers need workers with a high level of basic skills--"not only the ability to read, write, and compute, but also the ability to use these skills in problem solving on the job" (Sticht, 1987). Mikulecky (1982) found that students still in school read less than almost every category of worker; that trend is exacerbated by the changing workplace. Those who are least skilled will be threatened by unemployment. The proportion of young men with limited education who lack an income has grown significantly (Berlin & Sum, 1988). The undereducated and the poor, who are disproportionately Black and Hispanic, will be particularly affected (Johnston & Packer, 1987).

Employers are increasingly aware of the gap between the basic skills needed for successful job performance and the skills of the workforce. The introduction of new technology and processes often triggers this awareness. Companies find that many workers are not "trainable"; they cannot be trained to use the new technology because they lack the necessary basic skills. To make the situation more difficult, technology is being introduced in most jobs (e.g. computers are being installed in trucks to replace diaries). Displaced workers whose former jobs consisted of tasks demanding routine manual and mental skills find it increasingly difficult to find similar new employment (U.S. Congress, Office of Technology Assessment, 1986). Of those workers displaced from farming, forestry, and fishing, 30% remained unemployed. Of the 70% that were re-employed, only 28% remained in farming and other rural occupations; none went into service occupations (Committee for Economic Development, 1986).

Inadequate workforce literacy (and the resulting decreases in productivity and profitability) is expected to be a costly drain on businesses and industries in the future. Even now employee illiteracy is costly to businesses as is illustrated in the table on the following page.

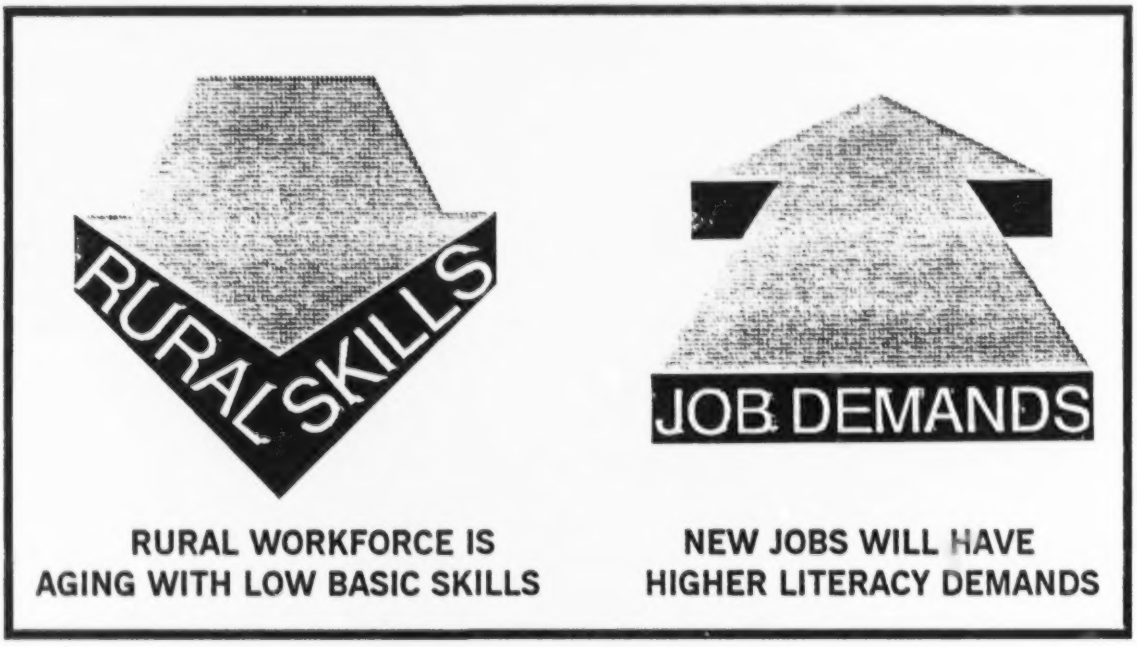
Costs to Businesses from Employee Illiteracy

- O Costly mistakes made by employees who lack adequate basic skills
- O Lost productivity and efficiency
- O Decreased product quality
- O Increased need for supervision
- O Increased cost of training
- O Problems in the relationship of workers with supervisors and coworkers
- O Accidents due to inability to follow safety directions

(National Alliance of Business, 1987; Winterbauer, 1985, Henry & Raymond, 1982; Hymowiz, 1981)

Unfortunately, many young adults, whether high school graduates or dropouts, lack the basic skills and problem-solving abilities to tackle even entry level jobs successfully. On the recent National Assessment of Educational Progress only a small percentage of those in the 21-25 year old age sample could perform at levels typified by the most complex tasks (Kirsch & Jungeblut, 1986). Venezky, Kaestle, and Sum (1987), who reanalyzed the data, concluded that it is not the basic literacy skills, such as decoding or answering literal comprehension questions, that give young adults in this country a problem; rather, it is complex thinking skills, such as drawing inferences and solving problems, that prove the most troublesome. Unfortunately, these are the very skills most needed on the job.

We conclude that the current situation is a difficult one: a shrinking and aging workforce with lower basic skills to supply labor for jobs with higher literacy demands.



The question remains as to how literacy and adult basic education providers can prepare today's adults for the literacy demands of society and particularly of the workplace; specifically in this paper, how education service providers can serve the literacy needs specific to rural adults.

Current Literacy Initiatives

Adult literacy needs are the target of a variety of federally legislated programs coordinated by the Pennsylvania Department of Education (PDE). Programs include the delivery of services to Adult Basic Education (ABE), English-as-a-Second Language (ESL), and the high school equivalency certificate (GED). Special demonstrations and experimental projects have been funded. Recent thrust within PDE include delivering basic skills instruction at the worksite and using federal funds for literacy programs for the homeless.

A variety of other federal programs focus on the literacy problem. The Job Training Partnership Act (JTPA) offers job training services for those who are unemployed and at the poverty level. The recent Joint Jobs Initiative provides welfare recipients with basic skills instruction and job training. The Library Service and Reconstruction Act encourages libraries to offer a variety of services ranging from recruitment/referral to offering literacy programs in public libraries.

In 1987, The Pennsylvania State Coalition for Adult Literacy was established which brings together literacy service providers, business/industry, unions, government, media, and other public and private sector organizations to provide leadership and technical assistance to state and local adult literacy initiatives.

State Funded Programs

Although the federal programs represent a start in addressing the literacy needs in the Commonwealth, the Pennsylvania General Assembly recognized the need for additional state support for literacy by passing Act 143, the Adult Literacy Act in 1986. While most federal programs are targeted at adults with a 4th grade level and above, this new state program is targeted at those adults with a 5th grade level and below. Program support, coordinated by PDE, began in January, 1987, with a two million dollar authorization for six months.

The criteria for funding in Act 143 include the following priorities: Number of eligible adults who 1) receive public assistance are unemployed or displaced homemakers; 2) do not have a high school certificate of graduation from a secondary school and are not currently enrolled in an adult literacy program; 3) members of minority groups; 4) have less than a fifth grade reading level. The fifth priority is coordination of various services, such as JTPA, offices of employment security, and social service agencies, to provide client outreach and referral.

Funds were increased to $5 million for fiscal year 1987. The report of program statistics for the first six months (January 1-June 30, 1987) is presently available from PDE. The observations in the next section are drawn from that report (Pennsylvania Department of Education, 1988).

The question for this paper is whether rural adults are being served in proportion to their needs under the Adult Literacy Act of Pennsylvania.

The Adult Literacy Act, mandated by the Pennsylvania General Assembly to serve no more than 20% GED programs, has provided much needed support to adult literacy councils. Furthermore, the emphasis on those functioning below a fifth grade reading level has resulted in much of the funds going to support literacy councils. The availability of state adult literacy funding for training volunteers has enhanced training opportunities offered by literacy councils.

In Pennsylvania, 41 of the 67 counties are designated as "non-metropolitan"; ***25 of these 41 basically rural counties offer no literacy programs under Act 143 of 1986.*** Of

these, however, 13 counties report some students being served by programs located in other counties. Out of the 38 counties across the state that received Act 143 funds, Philadelphia, Erie, and Allegheny Counties received "a large proportion of the 1986-87 funds" (Pennsylvania Department of Education, 1988, p.4). ***Philadelphia alone received about 40% of that funding.***

Since one of the priorities of the Adult Literacy Act (Act 143 of 1986) is to serve minorities, it is noteworthy that nearly three-fourths of the students served during the first six months of the Act were minority group members. This priority may, in fact, serve to discourage literacy programs in rural areas where few minority group members live.

One initiative that was specially funded by the Pennsylvania legislature is the establishment of a rural adult literacy demonstration project at the Center for Rural Librarianship at Clarion University. The demonstration project will identify unique elements in rural adult literacy service provision and build an appropriate structure for the delivery of literacy services in rural areas.

Implications for Policy

Increasing professionalization of the literacy movement, encouraged by Act 143 funding, has benefited rural as well as urban programs. Funds targeted for staff development have helped to upgrade both volunteers and staff. Given multiple sources of support, many literacy councils which began strictly as volunteer efforts are increasingly hiring part-time or full-time directors and coordinators. With federal and state funding comes the need to provide fiscal and program accountability, including systematic record-keeping, which, in turn, necessitates professional staff.

Literacy councils without professional staff--located primarily in rural areas--must rely on staff from other councils to train their volunteers. In response to this need, the Tutors of Literacy in the Commonwealth (TLC) has formed a staff development network of regional coordinators who train trainers who can provide staff development to the volunteers in their literacy councils. TLC, also funded under Act 143, has especially served a need in rural areas where the lack of trained staff to work with tutors has been a major problem.

Several conclusions seem apparent. ***State funds for adult literacy authorized by Act 143 are not being widely used in rural areas.*** Perhaps the criteria of greater numbers of students, especially those from minority groups, discourage rural literacy councils and ABE programs from applying. Inspection of the 1980 Census data indicates that the need for adult literacy instruction exists, perhaps even more than in urban areas, when the proportions of undereducated citizens are compared. Yet, in terms of actual numbers, the urban areas have more undereducated citizens. The Act 143 legislation seems to favor funding to urban areas with the greater population base, especially consisting of minorities.

Nevertheless, rural counties have benefited from the staff development thrusts funded by Act

143. With increased appropriations for Act 143, more rural literacy councils may be funded in spite of their lower numbers of students, especially those from minority groups.

Other factors must be considered when focusing on literacy programs in the rural areas. Rural people are not only geographically isolated but also socially isolated. Geographic isolation needs to be considered in the financial costs of delivering literacy programs and services to rural areas. The fact that rural people have access to fewer organizations which might provide literacy programs is another consideration. The geographic and social isolation can cause low self-esteem and lack of motivation to improve their well-being, especially in educational endeavors. A small research study funded by the Center for Rural Women (Wolfe, 1987) at the Institute for the Study of Adult Literacy looked at the factors necessary to recruit rural women into adult literacy programs; the conclusion was that the existing rural networks must be used--that the usual recruitment methods that work in urban areas are generally ineffective.

It may also be that traditional models of instruction do not work as well in rural areas. Perhaps there is a greater need for technology to deliver programs using the methods of distance learning. Satellites, cable and closed-circuit television, radio, and computers hold promise in rural areas where the need for adult education is great but the delivery is difficult.

Factors to Consider when Designing Literacy Programs for Rural Areas

- **GEOGRAPHIC ISOLATION** means higher costs to deliver services.
- **LOWER POPULATION DENSITY** results in less students per class.
- The **SOCIODEMOGRAPHIC MAKEUP** of rural populations must be recognized in program allocation criteria.
- Rural areas have **FEWER ORGANIZATIONS** that could provide literacy programs
- Isolation can lead to **LOW SELF ESTEEM** and affect motivation to participate in literacy.
- Existing **RURAL NETWORKS** must be used to recruit student - urban recruitment methods don't work.
- **TECHNOLOGIES** which can deliver programs over distances are particularly important in rural areas.

Summary and Conclusion

Rural Pennsylvania is faced with a difficult situation. The workforce has lower basic skills to supply labor for jobs with increasing literacy demands. Federal and other initiatives have provided a start in addressing the literacy problems in Pennsylvania and state funds have been allocated to further this effort. However, the state funded programs have not served rural areas in proportion to their needs. ***Rural areas have inherent disadvantages which must be taken into account in order for them to participate in literacy programs.***

The evidence points to the need for developing a set of policies for providing literacy programs to rural adults in Pennsylvania that is coordinated with the other provisions for literacy in the Commonwealth.

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